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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,645	06/01/2001	Jeyhan Karaoguz	41996/CAG/B600	1717
23363	7590	06/20/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			KIM, KEVIN	
PO BOX 7068				
PASADENA, CA 91109-7068			ART UNIT	PAPER NUMBER
			2638	
DATE MAILED: 06/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,645

Applicant(s)

KARAOGUZ, JEYHAN

Examiner

Kevin Y. Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,8,9,13,17-42,45,48,49,52,54,55 and 58-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,13,45,52 and 58-62 is/are allowed.
- 6) ☒ Claim(s) 8,9,17-21,23-28,31-33,35-40,48,49,54 and 55 is/are rejected.
- 7) ☒ Claim(s) 22,29,30,34,41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/10/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on January 24, 2005 have been fully considered but they are not persuasive.

First, Applicant argues that because the Shin patent did not describe the rectangles in Fig. 6 represent delay registers claims 8,17,48 and 54 are not anticipated. However, a turbo encoder such as disclosed by the Shin patent consists of delay registers to generate state bits. Input bits are stored in the delay registers to be read as state bits.

Second, Applicant observes that the prior teaching of "delay registers" suggests any number of delay registers **including one**. Thus, it appears, applicant believes that claims 8,17,48 and 54 requiring "at least two delay register" are not anticipated. However, by the same logic, because the prior teaching of "delay registers" suggests any number of delay registers, it could be two or three or more. More importantly, though, the Shin patent shows two delay registers, thus reading on the limitation "at least two delay registers."

Third, Applicant contends that while the Stephen et al discloses an RF state external to a turbo encoder the present invention is "an integral part of the transmitter device." However, claims 19-21,23-27,31-33 and 35-39 define an RF stage "coupled" to the encoder. Thus, the question here is whether the RF state of Stephen et al is "coupled" to an encoder. The answer is, of course, yes, regardless of whether it is coupled externally or integrally.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 8,9,17,18,48,49,54 and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by Shin (previously cited).

Claims 8,17,48 and 54.

Shin discloses (see Fig.6) an encoder (17) comprising,
“a state machine” (21) for generating a plurality of state bits, i.e., bits in the registers inside the state machine and
“an interface” (43) to couple an input (41) relating to one of the state bits into the state machine during a time period, wherein the state machine includes at least two delay registers. (see two rectangles representing delay registers).

Claims 9,18,49 and 55.

Fig.6 shows an adder coupled to the delay registers.

Claim Rejections - 35 USC § 103

4. Claims 19-21,23-28,31-33,35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin in view of Stephen et al (previously cited).

Claims 19 and 31.

Shin discloses (see Fig.6) an encoder (17) comprising,
“a state machine” (21) for generating a plurality of state bits, and

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“an interface” (43) to couple an input (41) relating to one of the state bits into the state machine during a time period. Shin fails to disclose “an RF stage coupled to the encoder.” Stephen et al teaches the use of an encoder in an RF communication system for a forward error correction. Thus, it would have been obvious to one skilled in the art to use the encoder of Shin in an RF transmitter, as taught by Stephen et al, for the purpose of improving the bit error rate performance.

Claims 20 and 32.

Fig.6 shows that the “interface” (43) is a switch (SW).

Claims 21 and 33.

When the switch is closed i.e., during “a second period,” an input X_n is coupled into the state machine.

Claims 23 and 35.

The encoder has an output (P_N) that includes “a second one of the state bits,” i.e., one the values in the registers

Claims 24 and 36.

The interface (43) comprises an output (x_N) and the encoder output further includes the interface output.

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Claims 25 and 37.

The state machine is a 4 state finite machine, see Fig.1, thus reading on “a 2^p -state finite state machine” where p equals 2.

Claims 26 and 38.

Fig. 6 shows two “delay registers” represented by two rectangles.

Regarding claims 27 and 39 Fig.6 shows an adder coupled to the delay registers

Claims 28,40.

Though not described, “a transmit control unit” is required to operate the switches (43,45).

Allowable Subject Matter

5. Claims 4,13,45,52,58-62 are allowed.
3. Claims 22, 29,30,34, 41,42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kvk



**CHIEH M. FAN
PRIMARY EXAMINER**